

TWO NEW SPECIES OF SCHIZOMIDS FROM INDIA
WITH RANGE EXTENSION FOR *SCHIZOMUS TIKADERI*
(ARACHNIDA: SCHIZOMIDA)¹

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(With twenty-six text-figures)

Key words: Arachnida, Schizomida, *Schizomus chalakudicus* sp. nov.,
S. chaibassicus sp. nov., *S. tikaderi*, new description, range extension

Schizomid collections deposited by F.H. Gravely in the erstwhile Indian Museum, Calcutta (= Kolkata) were located and studied. The specimens collected from Chaibassa, Chhota Nagpur, Bihar and Chalakudi near Cochin, Kerala are new species and have been described and illustrated. The specimens for *Schizomus tikaderi* were collected from localities other than the type locality and have been added as new known localities and range extension for this species in Western India.

The schizomids, tiny animals which inhabit specialized habitats, occupy a distinct order amongst the Arachnids. They have received little attention from arachnologists, and need thorough exploration. Pocock (1900) has reported four species under the Suborder Tartarides in the FAUNA OF BRITISH INDIA. Subsequently, Gravely (1911a, 1911b, 1912, 1915, 1925) collected schizomids from India, Sri Lanka and Burma, and described three new species from India (Bastawade 1985, Bastawade and Pal 1992, Cockendolpher 1981, Cockendolpher *et al.* 1994 and Reddell and Cockendolpher 1985, 1991). Fernando (1957) described a new species from Sri Lanka. Cockendolpher, Sissom and Bastawade (1988) have described a new species *Schizomus tikaderi* from Maharashtra, India.

The type specimens of the three new species described by Gravely were deposited in the collections of the erstwhile Indian Museum, Calcutta (presently called the National Collections, Zoological Survey of India, Kolkata). He also deposited some undescribed schizomid collections, which have been studied by the author, and two new species *Schizomus chalakudicus* sp. nov. and *S. chaibassicus* sp. nov.,

from Kerala and Bihar states respectively, described here. Two new records of *Schizomus tikaderi* from the Western Ghats, Maharashtra, have also been given.

Schizomus chalakudicus sp. nov.

(Figs 1-13)

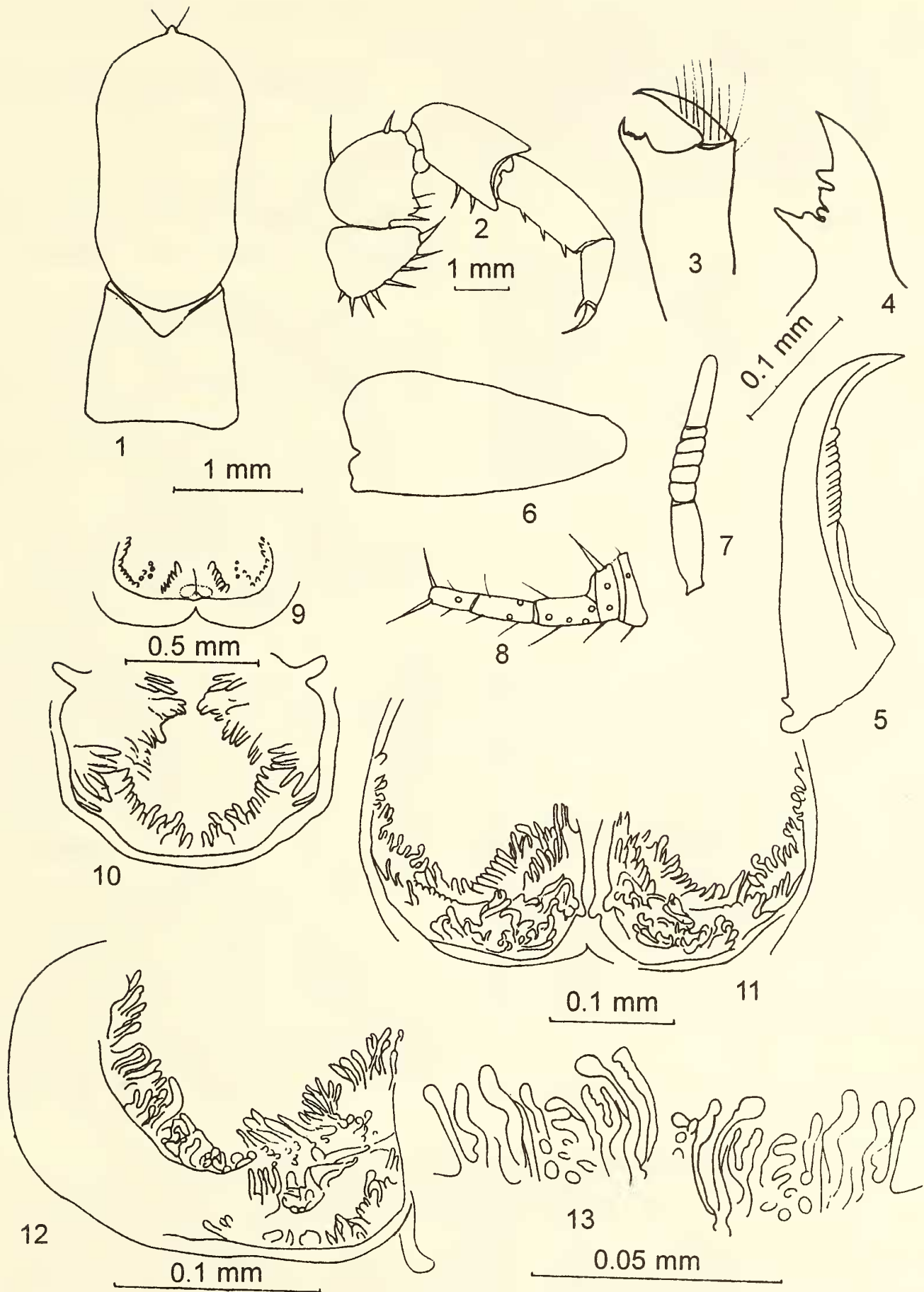
Female, cephalothorax smooth, propeltidium acutely pointed on mid anterior margin, bent down at the forward end and supported with a median seta and a pair of basal setae, three pairs of dorsal submedian setae present, eyes or eyespots totally absent, mesopeltidium very thin and separated medially, metapeltidium deeply notched on anterior middle portion, no setae clearly noticed. Sternal setae not clear, but a pair of long sternapophysial setae present on anterior margin of anterior sternum.

Abdomen with tergites and sternites smooth, setation not clear, except for a pair of dorsal median setae on tergites I-IV; tergites X-XIII telescoped, with no clearly identifiable setae, segment XII without posterior process but armed with a pair of spinose setae, other setae unclear. Flagellum three segmented, only one pair of lateral and dorsal setae clearly present on the last annulus (Fig. 8). Sternite I: 0.86 times as wide. Spermathecae tubuliform, with numerous irregular shaped tubes on each side (Figs 9-13).

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NEW DESCRIPTIONS



Figs 1-13 *Schizomus chalakudicus* sp. nov., 1. Dorsal view of Cephalothorax, 2. Lateral view of Pedipalp, 3. Lateral view of Chelicera, 4. Lateral view of immovable finger of Chelicera, 5. Lateral view of inner margin of movable finger of Chelicera showing serrula, 6. Lateral view of Femur IV, 7. Lateral view of tarsus of leg I, 8. Lateral aspect of Flagellum, 9-12. Ventral view of Spermathecae and gonopods, 13. Details of tubuliform spermathecae

Chelicera with basal segment twice as wide, types of setae present as 1=3, 2=4, 3=6-7, 4=2, 5=?, and 6=1; immovable finger with three sharp teeth between two large teeth (Fig. 4), movable finger smooth except a rounded tooth at distal end of 11-12 sutured serrula on inner margin (Fig. 5).

Pedipalp with almost triangular form of trochanter, with 5-6 spinose setae on exterior ventral margin, femur round with an inner knob (Fig. 2), mesal surface with 5 spinose setae clearly noticed on ventromesal surface, all carinae obsolete; patella smooth, no spur on ventrolateral surface but only a few plumose setae seen; tibia also smooth, carinated, 4 spinose setae on ventromesal margin, carinae obsolete. Basitarsus-tarsus smooth, claw as long as basitarsus, spur about 1/3.

Legs I-IV as in Table 1, Femur IV 2.25 times as wide (Fig. 6).

Measurements (in mm): Total length 5.59; Cephalothorax 1.72 (Propeltidium 1.2 & Mesopeltidium 0.51), Abdomen 3.07 and Flagellum 0.77.

Material examined: Holotype 1 ♀ (in spirit) deposited in the National Zoological Collections of the Zoological Survey of India, Kolkata, Regn. No. not stated, Coll. F.H. Gravely, 14-30.ix.1914, type locality Chalakudi near Cochin (previously Cochin state), Kerala, India.

Distribution: Known only from the type locality.

Etymology: The new species has been

named after the type locality Chalakudi.

Schizomus chaibassicus sp. nov.
(Figs 14-26)

Female of 6.106 mm body size (except flagellum), pale yellowish-brown, paler on digits, body surface smooth, flagellum of three annuli.

Cephalothorax with smooth propeltidium, pointed medially on anterior margin, slightly bent forward, supported with a pair of basal setae, one pair of dorsal setae situated posteriorly at 1.05 mm, a pair of inconspicuous lateral eyespots present, mesopeltidium narrow, separated medially by almost half of its length, metapeltidium undivided, at the most notched medially on anterior margin (Fig. 14).

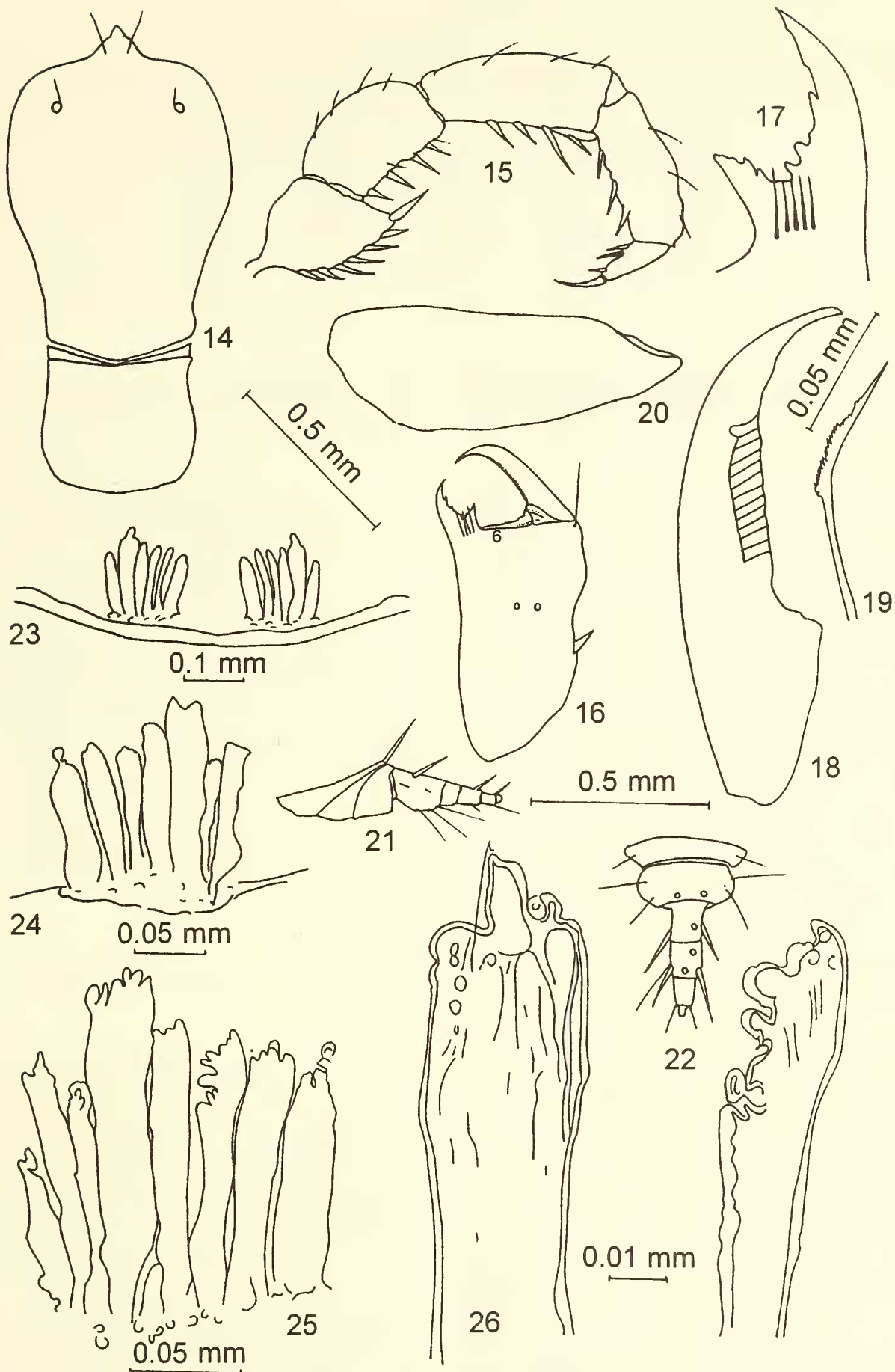
Abdomen with all tergites and sternites smooth, tergites I-IX each provided with a pair of median and a pair of lateral setae, tergites X-XI telescoped with 2-3 pairs of dorsal setae, sternite I 0.86 mm long and 1.03 mm wide, setation unclear; segment XII with two dorsal spinose setae and two pairs of ventral setae, without a dorsal process. Flagellum of three annuli, 0.645 mm long, setation as in Figs 21 & 22. Spermathecae elongated, lobate and form a cluster of 8-9 lobes as in Figs 23-26.

Chelicera 1.62 mm long, basal segment almost twice as wide, with a forwardly bent spinulated spine present on dorsal sub-basal portion, fixed finger with only two teeth

TABLE I
MEASUREMENTS IN MM FOR THE PEDIPALP AND LEGS I-IV
OF *SCHIZOMUS CHALAKUDICUS* SP. NOV.

	Trochanter	Femur	Patella	Tibia	Basitarsus	Tarsus	Total
Pedipalp	0.602	0.645	0.688	0.645	0.612		3.10
Legs I	0.452	1.333	1.591	1.505	0.473	0.903	6.257
II	—	0.860	0.516	0.666	0.516	0.430	—
III	0.344	0.946	0.473	0.430	0.559	0.566	3.268
IV	0.430	1.548	0.688	0.989	0.774	0.686	5.117

NEW DESCRIPTIONS



Figs 14-26 *Schizomus chaibassicus* sp. nov., 14. Dorsal view of Cephalothorax, 15. Lateral view of Pedipalp, 16. Lateral view of Chelicera, 17. Lateral view of immovable finger of Chelicera, 18. Lateral view of inner margin of movable finger of Chelicera showing serrula, 19. Enlarged view of 'blood hair' of Type I on immovable digit of Chelicera, 20. Outer (lateral) view of Femur IV, 21. Lateral view of Flagellum, 22. Dorsal view of Flagellum, 23-25. Ventral view of Spermathecae and gonopods, 26. Details of tubuliform spermathecae

TABLE 2
MEASUREMENTS (MM) OF PEDIPALP AND LEGS I-IV OF *SCHIZOMUS CHAIBASSICUS* SP. NOV.

	Trochanter	Femur	Patella	Tibia	Basitarsus	Tarsus	Total
Pedipalp	0.903	0.860	0.903	0.731	0.301		3.698
Legs I	0.559	1.935	1.849	1.548	0.473	0.817	7.181
II	0.301	1.505	0.645	0.817	0.688	0.473	4.429
III	0.387	1.118	0.516	0.645	0.731	0.645	4.042
IV	0.430	1.763	0.817	1.247	1.032	0.774	6.063

(Fig. 17), 13-14 minutely sutured serrula on inner margin without guard teeth, types of setae present as 1=4, 2=4, 3=5, 4=2, 5=7 and 6=1.

Pedipalp with trochanter acutely produced anteriorly, ventromesal margin with 7 stout spinose setae (Fig. 15), femur not rounded, smooth, without carinae, anteroventral margin with 3 spinose setae, mesal with 1 seta; patella acarinated, smooth, ventrolateral margin with 3 spinose setae, one much longer, dorsal surface with 2 to 4 long setae; tibia with scattered delicate setae, dorsal surface with few plumose and 3 spinose setae; basitarsus-tarsus with several long plumose setae on ventromesal and ventral surface, claw about 2/3 of basitarsus-tarsus, spur about 1/3, anterior sternum with 7-8 setae and a pair of long stenapophysial setae, posterior sternum with 10 setae. Legs I-IV as in Table 2, Femur IV 2.8 times as wide as long (Fig. 20).

Measurements (in mm): Total length 6.106, Carapace 2.236 (Propeltidium 1.806, mesopeltidium, metapeltidium 0.43); Abdomen 3.87, Flagellum 0.645.

Material examined: Holotype 1 ♀ (in spirit) deposited in the National Zoological Collections of the Zoological Survey of India, Kolkata; Regn. No. not stated, Coll. P.E. Gravely, 1.x.1919, Type locality a pass between Chaibass and Chakradharpur, Chota Nagpur, Bihar, India.

Distribution: Known only from the type locality.

Etymology: The species name is derived from the type locality Chaibass.

Schizomus tikaderi

Cockendolpher, Sissom and Bastawade

This interesting species of Schizomida is so far known only from Sinhagad, Dist. Pune (Holotype) and from Bhiv Ghat, Dist. Sangli, Maharashtra (Paratype) (Cockendolpher *et al.*, 1988). During recent surveys of the Western Ghats, the author could collect 2 ♀♀ from Phonda Ghat (800 m above msl) and 2 ♀♀, 1 ♂ immature from Amboli Ghat (650 m above msl) both in Sindhudurg district, Maharashtra, thus extending its distributional range southwards in western peninsular India.

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NEW DESCRIPTIONS

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